

Workshop to Discuss the Future of the Takhi (*Equus ferus przewalskii*) in Mongolia: A Report

Lee Boyd

IUCN Equid Specialist Group: Przewalski's Horse Coordinator; Biology Department, Washburn University, Topeka, KS 66621 USA, E-mail: lee.boyd@washburn.edu

From 2-4 July 2008, scientists involved in the reintroduction of takhi (*Equus ferus przewalskii*) to Mongolia met at the Institute of Biology of the Mongolian Academy of Sciences in Ulaanbaatar to discuss issues related to the successful return of this species to the wild.

Takhi (Przewalski's horses, Asian wild horses) are the closest living relatives of domestic horses (*Equus caballus*), but considered a separate species, due to a difference in chromosome number and the fact that they have never been domesticated. Takhi became extinct in the wild as a result of competition with livestock, hunting, and a series of severe winters. The last wild takhi was sighted in Mongolia in 1969 and the species survived only in captivity. Since that time the captive population of takhi in zoos increased to the point that animals were available for reintroduction, and restoration of the species to Mongolia began in 1992. Because of the success of the Mongolian reintroduction initiatives, the International Union for the Conservation of Nature (IUCN) has downlisted the takhi from Extinct in the Wild to Critically Endangered. This achievement is encouraging, but there is still a long way to go before the species can be downlisted to Endangered. The purpose of this workshop was to reach a consensus on challenges faced by the reintroduction projects in Mongolia and discuss the future direction of efforts to conserve takhi in the wild.

The workshop was hosted by the Institute of Biology, Mongolian Academy of Sciences. Members of the IUCN Equid Specialist Group and participants from the three current reintroduction projects were in attendance. P. Moehlman and L. Boyd represented the IUCN/SSC Equid Specialist Group, and P. Moehlman, as Chair of the Equid Specialist Group, moderated the discussion. Representing Association TAKH were C. Feh, S. King, B. Munkhtuya, T. Samdanjigmed, and Ts. Sukhbold. Representing Hustai National Park (HNP) were N. Bandi, T. Batbaatar, Ts.

Dashpurev, T. Munkhbat, D. Nandintsetseg, and D. Usukhjargal. Representing the International Takhi Group (ITG) and the Great Gobi B Strictly Protected Area (SPA) were N. Enkhsaikhan, O. Ganbaatar, and P. Kaczensky. Ts. Janchiv represented the Institute of Biology, Mongolian Academy of Sciences.

The first day of the workshop began with a warm welcome by Ts. Janchiv. Participants then introduced themselves. Each of the three reintroduction sites was described, including the number and composition of staff directly involved with the takhi. A discussion of observation and data collection methodology followed. Ensuing from this discussion it was recommended that

- A standard necropsy protocol should be used, modeled on one developed by ITG.
- The Dashboard computer program used by HNP for data collection might be useful for the other sites as well, and perhaps HNP could organize a training workshop on the program's use.
- Takhi fecal samples should be collected for DNA analysis in order to confirm identity and parentage, and detect introgression of hybrids with domestic horses.
- Annual reports should be made available as pdf files on the web site of each group to facilitate exchange of information.

The focus of Thursday was to enumerate and discuss problems facing the reintroductions. Issues relating to **domestic horses**, **local people**, **habitat**, the **takhi** themselves, and **cooperation** were brought forth. On the last day of the workshop, participants refined this list for presentation to invited officials and scientists. Most agreed that **domestic horses** presented the greatest problem for takhi reintroductions, through the threats of hybridization, disease transmission, and social disturbance. Domestic horses may also be a positive or negative factor with regard to predation: either bearing the brunt thus sparing takhi, or educating predators with the search image, hunting skills,

and taste for horses. Proposed actions were directed toward preventing contact between the two equine species, and providing information to educate local people about why this is important. Capacity to perform genetic analysis for detection of hybrids and recommendations of what to do with hybrids must be developed.

The cooperation and engagement of **local people** is essential to the success of reintroductions. Issues identified include lack of information, livestock competition, need for alternative income especially if livestock numbers are reduced, poaching and theft, and negative impacts of tourism. Addressing these issues includes data collection on seasonal livestock numbers and management practices, socioeconomic status of local people, and impacts of poaching and tourism. Enforcement of laws, education about the reintroductions, and development of alternative income projects were also discussed.

Reintroductions can only succeed where there is available **habitat**, and in some areas water has become a limiting factor. Participants proposed mapping and monitoring water sources and documenting their utilization by people, livestock, wildlife and takhi. Protection of existing water sources is critical. The impact of dams, irrigation projects, and mining on habitat must also be studied.

Issues regarding the **takhi** themselves revolve around individual identification, population growth and sustainability, hybridization, and development of additional reintroduction sites. DNA analysis to identify individuals and detect hybridization is essential. Continued recording of individuals in the Studbook is recommended. Assessment of potential additional reintroduction areas in Mongolia is needed along with identifying potential funding and sponsoring organizations.

Cooperation between projects is important to the overall success of takhi reintroduction in

Mongolia. All face common issues regarding data collection, staffing, funding, and governmental support. Cooperation could be strengthened through annual meetings, web site information, and exchange of personnel for training. Additional actions include standardizing definitions and methodology, identifying sources of funding for training and for development of new reintroduction sites, and developing political awareness and support.

The final afternoon session was attended by B. Dashnyam, S. Dulamtseren, B. Lhagvasuren, Ts. Oyunsuren, Ts. Tsendsuren and Kh. Tumennasan from the Mongolian Academy of Sciences, L. Bayasgalan from the Ministry of Nature and Environment/CITES, B. Chimed-Ochir from the World Wildlife Fund, A. Fine of the Wildlife Conservation Society and C. Walzer from the ITG. Each had the opportunity to provide comments and advice on the issues listed above. From this discussion it became apparent that the next step is a Conservation Action Plan for the takhi in Mongolia. Also, although the Institute of Biology can perform DNA extraction, there is no DNA sequencer in Mongolia. Such equipment would benefit not only takhi reintroduction projects, but also the conservation of other wildlife in Mongolia. DNA samples would not need to be exported at great cost and risk of integrity, and Mongolian students would benefit from training on the equipment.

The participants departed with a sense of accomplishment derived from making new contacts, sharing information and experiences, identifying common problems, and possible solutions. We came away with some discrete tasks, as well as broad goals toward which to work. With such a dedicated group of individuals, the future of the takhi is certainly in good hands. We hope to convene in the not-too-distant future to again measure our progress, refresh our ties, and reinvigorate our efforts.

Received: 30 October 2008
Accepted: 18 November 2008